REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of November 10, 2009 is respectfully requested.

By this Amendment, claims 6-9 have been amended and are pending in this application. No new matter has been added by these amendments.

On pages 2-5 of the Office Action, the Examiner rejected claims 6-9 under 35 U.S.C. § 103(a) as being unpatentable over Shintani (JP 11-080952) in view of Sakemi et al. (US 6,245,394), Okuyama et al. (JP 2001-243886) and Shiokawa et al. (US 2003/0077972) or Nishimura et al. (US 2004/0135506). For the reasons discussed below, it is respectfully submitted that the amended claims are clearly patentable over the prior art of record.

Amended independent claim 6 recites a method for manufacturing a plasma display panel (PDP) including a process for forming a metal oxide film onto a substrate of the PDP. The method of claim 6 includes introducing inert gas into a deposition room during deposition of the metal oxide film, and introducing oxygen into the deposition room during deposition of the metal oxide film so as to reduce an oxygen deficiency in the metal oxide film. The method of claim 6 also includes *introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film*, wherein the oxygen or the at least one gas is introduced into the deposition room in a predetermined amount.

The method of claim 6 also includes controlling amounts of at least one of the inert gas and the other of the oxygen or the at least one gas to be introduced into the deposition room, and equilibrating the amounts of the gasses introduced into the deposition room with an amount of gas exhausted from the deposition room by a vacuum exhausting system so as to control the oxygen deficiency within a predetermined range and maintain a degree of vacuum in the deposition room within a range of 1×10^{-1} Pa to 1×10^{-2} Pa.

Shintani discloses a vapor deposition method in which oxygen is introduced into the processing chamber. Further, Shintani discloses that an oxygen introduction amount and an exhaust speed of the processing chamber are controlled such that the partial pressure of the oxygen becomes equal to a set value. However, as noted by the Examiner on page 3 of the Office Action, Shintani does not disclose a deposition room having a degree of vacuum *within a*

range of 1×10^{-1} Pa to 1×10^{-2} Pa, and does not disclose *introducing inert gas into the deposition room* during deposition of the metal oxide film, as required by independent claim 6.

Further, Shintani also does not disclose *introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film*, as required by independent claim 6.

In this regard, the Examiner cites Sakemi as disclosing a film growth method in which a degree of vacuum in the vacuum chamber is 10^{-4} Torr (1.3×10^{-2} Pa), which is within the range recited in claim 6. Further, the Examiner cites Okuyama as disclosing a method for manufacturing a plasma display panel in which a mixture of oxygen and an inert gas is introduced into a vacuum chamber. In addition, the Examiner cites Shiokawa as disclosing introducing a small amount of water vapor into the chamber during deposition of an MgO film. Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to operate the process of Shintani under a degree of vacuum taught by Sakemi, and to incorporate the introduction of an inert gas as taught by Okuyama and the introduction of water as taught by Shiokawa into the process of Shintani in order to arrive at the invention of claim 6.

However, none of the Sakemi, Okuyama and Shiokawa references discloses introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film, as required by independent claim 6. Accordingly, as none of the Shintani, Sakemi, Okuyama and Shiokawa references discloses or suggests *introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film,* as required by independent claim 6, it is respectfully submitted that the combination of the Shintani, Sakemi, Okuyama and Shiokawa references does not disclose or suggest introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film, as required by independent claim 6.

As an alternative to Shiokawa, the Examiner also cites Nishimura as disclosing a method in which carbon dioxide or water is introduced in order to form a PDP having, for example, a lower discharge voltage. Therefore, the Examiner concludes that it would have been obvious to

one of ordinary skill in the art to operate the process of Shintani under a degree of vacuum taught by Sakemi, and to incorporate the introduction of an inert gas as taught by Okuyama and the introduction of water or carbon dioxide as taught by Nishimura in order to arrive at the invention of claim 6.

However, it is noted that Nishimura does not disclose or suggest *introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film*, as required by independent claim 6. Rather, Nishimura discloses that a magnesium oxide protective film is formed on the front substrate by vacuum electron-beam evaporation in a vacuum up to 10^{-4} Pa (see step 13 of Fig. 2, and lines 1-11 of paragraph [0037]), and that phosphor layers on the rear panel are exposed to an impurity gas (*i.e.*, water or carbon dioxide) so that the impurity gas is adsorbed by the phosphor layers (step 17 of Fig. 2). In this regard, it is noted that Nishimura discloses that all of steps 13-15 applied to the front substrate and all of the steps applied to the rear substrate after the firing of phosphors (*i.e.*, after step 11 in Fig. 2) up to step 15 are performed under the same conditions except for the step of adsorbing the impurity gas (*i.e.*, step 17) (see lines 11-14 and 19-23 of paragraph [0037]), in which water or carbon dioxide is introduced to the rear panel.

In other words, Nishimura discloses that the impurity gas (*i.e.*, water or carbon dioxide) is introduced only during step 17 in which the impurity gas is adsorbed by the phosphor layers of the rear panel. Accordingly, Nishimura does not disclose that the impurity gas is introduced during deposition of the magnesium oxide protective film of the front panel (*i.e.*, step 13), and therefore does not disclose or suggest introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film, as required by independent claim 6.

Accordingly, as none of the Shintani, Sakemi, Okuyama and Nishimura references discloses or suggests *introducing at least one gas selected from the group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film,* as required by independent claim 6, it is respectfully submitted that the combination of the Shintani, Sakemi, Okuyama and Nishimura references does not disclose or suggest introducing at least one gas selected from the

group consisting of carbon monoxide and carbon dioxide into the deposition room during deposition of the metal oxide film so as to increase the oxygen deficiency in the metal oxide film, as required by independent claim 6.

Therefore, for the reasons presented above, it is believed apparent that the present invention as recited in independent claim 6 is not disclosed or suggested by the Shintani reference, the Sakemi reference, the Okuyama reference, the Shiokawa reference and the Nishimura taken either individually or in combination. Accordingly, a person having ordinary skill in the art would clearly not have modified the Shintani reference in view of the Sakemi reference, the Okuyama reference, the Shiokawa reference and the Nishimura reference in such a manner as to result in or otherwise render obvious the present invention of independent claim 6.

Therefore, it is respectfully submitted that independent claim 6, as well as claims 7-9 which depend therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice to that effect is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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